

Mental Health Support Website and Application

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Abstract— The project aims to address the growing challenge of mental health issues in Punjab, India, by developing a comprehensive Mental Health Support Website and application. The project identifies key issues such as stigma, limited accessibility to mental health professionals, and an information gap on mental health topics. In response, our contribution involves creating a user-friendly platform that offers reliable information, access to mental health professionals, AI-powered chatbot support, and interactive tools like psychological tests and community forums.

Our results demonstrate that the platform potentially bridges gaps in mental health care access, improves user awareness, and provides valuable resources for individuals seeking support. By fostering community engagement and providing essential resources, our project can pave the way for a more inclusive and supportive environment for mental health in Punjab.

Keywords— Mental Health, Well-being, MHQ, Find Help, Psychologists, Surveys, Blog, Peer Support, Information Library, AI Chatbot

I. INTRODUCTION

This project aims to provide a platform where individuals can find easy access to mental health professionals, reliable information, and tools to assess and enhance their mental well-being. The purpose of the Mental Health Support Website is to establish a comprehensive platform dedicated to addressing the increasing concerns surrounding mental health. This project aims to create a user-friendly website that facilitates easy access to mental health professionals, reliable information, and tools designed to assess and improve mental well-being.

In today's fast-paced and interconnected world, the discourse around mental health has gained unprecedented momentum and importance. As we navigate the complexities of modern life, it becomes increasingly evident that mental health issues are not only prevalent but also profoundly impactful. Recognizing the urgency of addressing these concerns, we present the Mental Health Support Website project. Our project emerges as a comprehensive platform designed to tackle the growing challenges surrounding mental well-being. It is an initiative born out of a profound understanding of the struggles individuals face and a resolute

commitment to providing them with the support, information, and tools they need.

The Mental Health Support Website project envisions a world where seeking assistance for mental health concerns is as natural as seeking help for physical health issues. We are dedicated to breaking down the barriers of stigma and providing a discreet and compassionate environment where individuals can freely seek help without fear of judgment. In a world where distances and barriers can hinder access to care, our platform strives to bridge the gap, making it easier for individuals, particularly in Punjab, India, to connect with psychiatrists and mental health professionals.

Beyond connecting users with professionals, we are committed to arming individuals with knowledge. Our information library serves as a trusted resource, offering medically accurate articles on a wide range of mental health topics. We believe that knowledge empowers individuals to make informed decisions and foster a deeper understanding of mental health conditions.

In addition to professional guidance and information, our platform provides interactive tools for self-assessment and improvement. We believe that promoting self-awareness and offering psychological tests can be pivotal in an individual's journey towards mental well-being. As we embark on this transformative journey, we extend an invitation to you to join us in our mission to promote mental health awareness and well-being. Together, we can cultivate a supportive community where individuals can find the solace, strength, and resources they need to navigate the intricacies of mental health. Welcome to the Mental Health Support Website – a sanctuary of care, knowledge, and empowerment, dedicated to catalyzing positive change in the realm of mental health.

A. Problem Statement

The scope of this project encompasses the end-to-end design, development, and deployment of the Mental Health Support Website. The website will serve as a vital resource for individuals seeking information and guidance related to mental health issues. It is not limited to a specific demographic and will be accessible to users in Punjab, India.

● Stigma

The stigma surrounding mental problems prevents individuals from seeking the support they need. Our Mental Health Support Website aims to dismantle this barrier by providing a discreet and confidential platform. By offering a safe space where users can seek guidance and assistance without fear of judgment, we aim to empower individuals to overcome the reluctance associated with seeking help. Through secure channels and a supportive environment, users can access resources, connect with professionals, and engage with tools while maintaining their privacy and confidentiality. Figure 1 below shows the stigma associated with mental health in three broad segments.

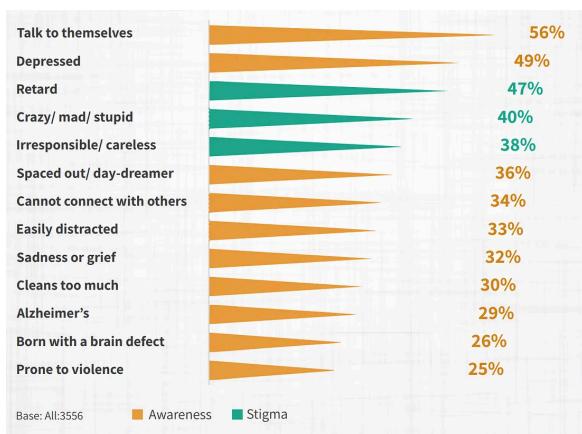


Fig. 1 How would you describe a person with mental illness? Source: How India Perceives Mental Health: TLLF National Survey Report 2018

In India, there is a stigma attached to mental health issues. A 2015 World Health Organization research found that one in five Indians may experience depression at some point in their lives, or 200 million people. However, only 10–12% of these victims will seek assistance because of the stigma attached to mental illness, a lack of knowledge, and restricted access to professional assistance. According to the same survey, 71% of the respondents used terminology linked to stigma, even though 87% of the respondents indicated some awareness of mental illness. This demonstrates how, despite their connections, stigma and awareness are two different problems. In order to address the burden of mental illness in India, several issues must be tackled concurrently.

In India, as of 2017, over 14% of the population experienced some form of mental illness. Indian women in their later adult years make up the majority of this percentage. Forecasts indicate that mental health issues would cause India to incur enormous economic losses. It is inevitable that these figures have increased with the Covid-19 pandemic.

● Accessibility

In certain regions, access to mental health professionals remains limited, posing a significant challenge for individuals seeking support. Recognizing this hurdle, our website takes a proactive approach by providing contact information for nearby psychiatrists and mental health professionals in Punjab, India. This initiative aims to ensure that geographical constraints do not hinder individuals from accessing essential mental health care. The National Mental Health Survey (NMHS) - 2016 found that insufficient availability to mental health specialists and appropriate infrastructure prevents over 80% of Indians from receiving treatment. A WHO survey found that there are just 0.29 psychiatrists and 0.07 psychologists for every 100,000 people in India. All people have the right to access mental healthcare treatment and services, regardless of whether they have a mental illness, according to section 18(2) of the Mental Healthcare Act (MHCA). These services must be reasonably priced, of high quality, sufficiently available, and geographically accessible without discrimination. According to estimates from the Global Health Data Exchange and the Lancet study, between 70% and 92% of people in need of mental health treatments are unable to get access to high-quality care.

About 150 million adults in India, or more than 10% of the population, suffer from mental illness and require assistance. The private sector provides 80% of healthcare in India, so access to affordable mental health care has long been a problem. The most often cited factors contributing to healthcare disparities in the nation are gender (36.1%), education (45.4%), and income (61.2%). It is imperative to assess the existing care models critically and concentrate on novel delivery models that can aid in closing the significant care gap. In India, the community-based model has the potential to be an effective means of providing care and increase access to mental health services.

● Information Gap

The scarcity of easily accessible and medically accurate information on mental health contributes to misconceptions and lack of understanding. To combat this, our website boasts an expansive information library meticulously curated to bridge this informational void. The content within this repository comprises credible, up-to-date resources covering a wide spectrum of mental health topics. By ensuring the availability of reliable information, our platform empowers users with knowledge, fostering informed decisions, and deeper comprehension of mental health conditions.

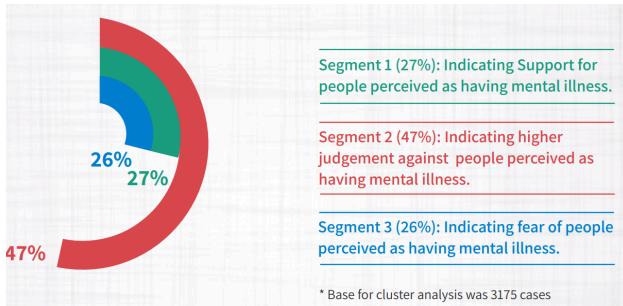


Fig. 2 Three Broad Segments. Source: How India Perceives Mental Health: TLLLF National Survey Report 2018

• Mental Health Awareness

Raising awareness about mental wellbeing is crucial in addressing the prevailing lack of understanding. Our platform is designed to serve as an educational resource, providing not only informative articles but also psychology tests aimed at increasing awareness and knowledge. These resources are strategically integrated to encourage engagement and promote mental health literacy. By offering accessible tools for self-assessment and educational content, we aim to equip individuals with the understanding needed to recognize, address, and advocate for mental well-being.

In recent years, there has been a global upsurge in mental health awareness. At the forefront of this effort, emphasizing the role that mental health plays in accomplishing global development goals, is the World Health Organization (WHO). Suicide is the fourth most common cause of mortality for people aged 15 to 29 worldwide, and depression is one of the main causes of disability. Ten percent of all diseases worldwide are mental, neurological, and drug use disorders, and twenty-five percent of non-fatal diseases are caused by these conditions. People with mental health disorders frequently face serious human rights abuses, discrimination, and stigma notwithstanding advancements in some nations. Even though there are many effective, reasonably priced treatments for mental health issues, there is still a substantial disparity between those who require care and those who have access to it. Global estimates of the proportion of individuals receiving treatment for particular mental health disorders stayed below 50%, with just 29% of people with psychosis and 40% of people with depression receiving care on a global median basis. In order to guarantee 100 million more people have access to high-quality, reasonably priced care for mental health conditions in 12 priority countries, the World Health Organization (WHO) announced the WHO Special Initiative for Mental Health (2019–2023): Universal Health Coverage for Mental Health in 2019. The World Mental Health Report: Transforming Mental Health for All was released by WHO in 2022..

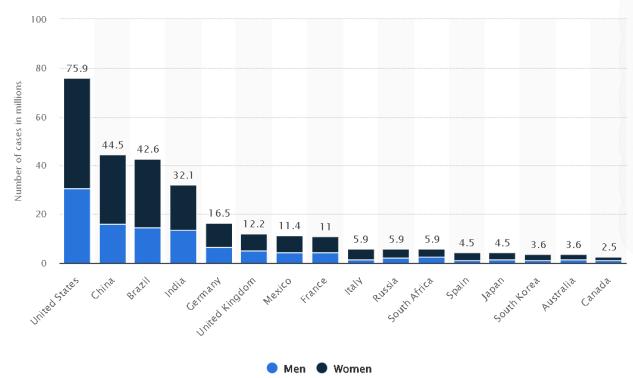


Fig. 3 Number of lifetime prevalent cases of anxiety disorders among adults worldwide in 2018 (in millions). Source: Statista (<https://www.statista.com/statistics/1115900/>)

• Community Support

The power of shared experiences in fostering healing and support cannot be overstated. Through the blog feature, our platform facilitates a community-centric approach, allowing users to share their personal mental health journeys. This inclusive space encourages storytelling, empathy, and mutual support. By enabling individuals to voice their experiences, challenges, and triumphs, we aim to cultivate a compassionate and supportive community. This feature embodies our commitment to nurturing an environment where individuals feel validated, heard, and understood, fostering solidarity and resilience in the face of mental health challenges. Figure 2 below shows how people in the community perceive mental health. The following statistics make community support even more important:

- Anxiety affects 284 million people in the world.
- Depression affects 264 million people.
- Alcohol use disorder affects 107 million people.
- Drug use disorder affects 71 million people.
- Bipolar disorder affects 46 million people.
- Schizophrenia affects 20 million people.
- Eating disorders affect 16 million people.

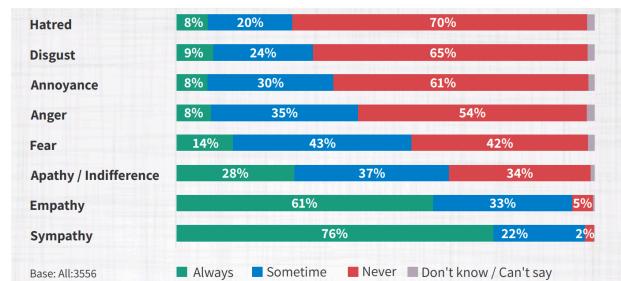


Fig. 4 Feelings towards Mental Illnesses. Source: How India Perceives Mental Health: TLLLF National Survey Report 2018

B. Some more Statistical Data

According to the National Mental Health Survey of India, 2015-16, the prevalence of mental illness in India is 10.6%. In Punjab, the total lifetime prevalence of mental illnesses was 18% and the current prevalence was 13%. The survey found that every 6th Punjabi has suffered from mental illness and every 8th is still suffering. Depression alone affected 45.7 million people in India. Anxiety disorders affected 44.9 million people. States and Union territories like Daman and Diu, Himachal Pradesh, Sikkim, Lakshadweep, Maharashtra, Telangana, Punjab, and Uttarakhand reported higher healthcare burden due to mental illness than the national average for India.

Here are some key statistics regarding mental health in India and Punjab:

- The total lifetime prevalence of mental illnesses in Punjab was 18% and the current prevalence was 13%.
- Every 6th Punjabi has suffered from mental illness and every 8th is still suffering.
- Depression alone affected 45.7 million people in India.
- Anxiety disorders affected 44.9 million people in India.
- States and Union territories like Daman and Diu, Himachal Pradesh, Sikkim, Lakshadweep, Maharashtra, Telangana, Punjab, and Uttarakhand reported higher healthcare burden due to mental illness than the national average for India.
- According to a survey conducted in 2020, Punjab has seen a significant rise in mental health issues, with a reported increase of 42% in cases of anxiety and depression.
- The National Mental Health Survey of India (2015-16) revealed that Punjab had a higher prevalence of mental disorders compared to the national average.
- The stigma associated with mental health issues often prevents individuals from seeking help. Only 10% of those in need of mental health services actually receive treatment.

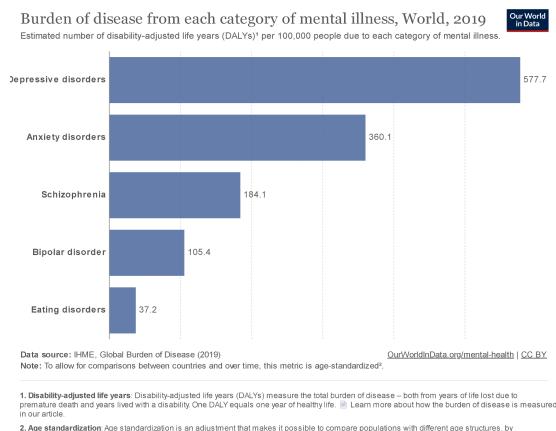


Fig. 5 Burden of disease from each category of mental illness. Source: Our World in Data (www.ourworldindata.org)

TABLE I
PREVALENCE OF MENTAL ILLNESSES IN INDIA.

Entity	Year	Depressive Disorders	Schizophrenia	Bipolar Disorder	Anxiety Disorders
India	2011	625.1265	177.60297	75.148735	280.5263
India	2012	624.27856	178.51956	75.12617	282.11465
India	2013	624.13824	179.58603	75.186195	283.5166
India	2014	624.2207	180.58412	75.20974	284.6553
India	2015	623.9644	181.19757	75.17389	285.53076
India	2016	623.63855	181.6862	75.20527	286.3654
India	2017	623.1486	182.03555	75.23733	286.72156
India	2018	620.723	181.51364	75.22718	284.22504
India	2019	616.13	180.38898	75.254654	278.50314
per 100,000 people in, both sexes aged age-standardized					

SOURCE: OUR WORLD IN DATA (WWW.OURWORLDINDATA.ORG)

II. LITERATURE REVIEW

A. BetterHelp

BetterHelp is an online counseling platform that delivers virtual treatment with certified and licensed therapists via chat, phone calls, and video sessions. It enables easy access to mental health professionals. With over 23,000 certified therapists providing services to over 2.5 million clients, it is the biggest online counseling platform in the world. BetterHelp charges a monthly membership fee, which you are free to discontinue at any moment. In addition, it offers other services including group therapy sessions and journaling. In recent years, BetterHelp has increased the range of services it offers and has partnered with institutions and businesses. Additionally, it has a number of sister websites that offer treatment for individuals wanting a faith-based approach, teens, couples, and LGBTQIA+ members.

Users have reported certain limitations using BetterHelp. For example, it doesn't offer psychiatry treatments, so people who need medicine to control their symptoms will need to find another place. It is against the law for the mental health providers on this site to diagnose mental illnesses. Through BetterHelp, counselors are unable to diagnose mental health issues. On the other hand, licensed therapists are capable of diagnosing illnesses. BetterHelp therapists are qualified to offer talk therapy; but, they are not qualified to make medical diagnoses, write prescriptions, or carry out court orders. BetterHelp does not offer child or teen therapy. BetterHelp is regarded as one of the best teletherapy platforms for a range of mental health issues in spite of these drawbacks. The majority of users express satisfaction with BetterHelp's network of therapists and services.

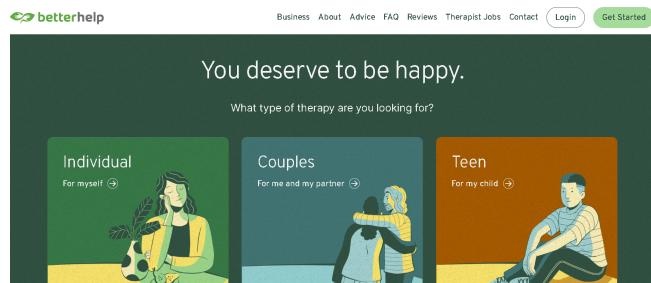


Fig. 6 BetterHelp Homepage

- **Features**

1. **Online Therapy Sessions:** BetterHelp offers therapy sessions conducted entirely online, ensuring accessibility regardless of location. This feature allows users to engage with licensed professionals remotely, removing geographical barriers to mental health support.
2. **Chat Support:** Users can engage in text-based chat support with trained professionals, providing immediate assistance and fostering a sense of connection. This asynchronous communication channel ensures users can seek guidance between scheduled sessions.
3. **Access to Licensed Therapists:** BetterHelp connects users with licensed therapists, ensuring professionalism and expertise in the support provided. The platform emphasizes matching users with therapists suited to their specific needs.
4. **Accessibility and Convenience:** BetterHelp allows users to access therapy from anywhere with an internet connection, eliminating geographical barriers. It offers flexible scheduling, allowing users to communicate with therapists through messaging, live chat, phone calls, or video sessions, catering to various preferences and needs.
5. **Diverse Therapist Pool:** The platform boasts a diverse pool of licensed therapists, offering users a range of specialties and backgrounds to choose from. Users can switch therapists if the current match doesn't meet their needs, ensuring a better fit for individual preferences.
6. **Privacy and Anonymity:** The platform allows users to maintain anonymity, fostering a sense of privacy and comfort, which can be beneficial for individuals hesitant about seeking therapy. Users can communicate with their therapists at their own pace through messaging, allowing for ongoing support and the convenience of expressing thoughts and feelings as they arise.

- **Limitations**

1. **Paid Service:** BetterHelp operates on a subscription-based model, which might limit accessibility for individuals with financial constraints. The service's cost may exclude those in need of affordable mental health support.
2. **Focus on Counseling:** While excelling in offering counseling and therapy, BetterHelp's primary focus might limit access to comprehensive mental health information or self-help resources.
3. **Lack of In-Person Interaction:** Some individuals might find the absence of face-to-face interaction a limitation, as non-verbal cues can be crucial in therapy, and some issues might be better addressed in person.
4. **Response Time:** While the platform aims for timely responses, the nature of asynchronous communication (like messaging) can lead to delayed responses, which might not suit urgent needs.
5. **Limited Insurance Coverage:** While BetterHelp offers affordability, it might not be covered by all insurance plans, limiting accessibility for some individuals. Therapists on BetterHelp are licensed in specific states or countries, limiting the pool of available therapists for users based on their location.
6. **Tech Issues and Comfort Level:** Technical glitches or discomfort with using online platforms might hinder the therapy experience for some users.

B. Psychology Today

Psychology Today is a platform that provides a range of resources for individuals seeking information on mental health, therapy, and related topics. The platform offers a variety of features that can be useful for people looking to learn more about these topics or find a therapist. One of the key features of Psychology Today is its directory of therapists. This directory allows users to search for therapists in their area based on a variety of criteria, including location, specialty, and insurance. Users can also read reviews of therapists from other users to help them make an informed

decision. Another feature of Psychology Today is its blog section. The blog features articles written by mental health professionals on a variety of topics related to mental health and therapy. This platform allows users to connect with therapists online for remote therapy sessions. Sessions is a HIPAA-compliant platform that is available exclusively to Psychology Today members and their patients.

While Psychology Today offers many useful features, there are also some limitations to the platform. For example, the directory of therapists may not include all therapists in a given area, and the reviews of therapists may not be entirely reliable. Additionally, while Sessions can be a convenient way to access therapy, it may not be suitable for everyone, and some people may prefer in-person therapy. Overall, Psychology Today is a valuable resource for people looking to learn more about mental health and therapy. However, it is important to keep in mind the limitations of the platform and to do additional research when making important decisions about mental health care.

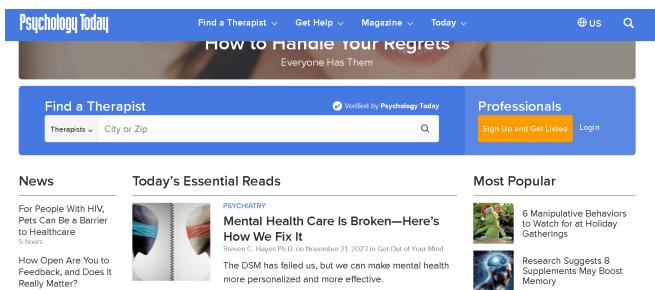


Fig. 7 Psychology Today Homepage

• Features

- 1. Directory of Mental Health Professionals:** Psychology Today serves as a comprehensive directory, allowing users to search for mental health professionals based on location and specialties. Users can refine searches based on specific therapy approaches, aiding in finding the right therapist.
- 2. Informative Articles:** The platform offers a broad range of informative articles covering various mental health topics. These articles provide valuable insights into conditions, therapies, and coping strategies.
- 3. Therapist Profiles and Directory:** Detailed profiles of mental health professionals assist users in making informed decisions when selecting therapists. Profiles often include bios, treatment approaches, and contact information. One of its key features is a comprehensive directory of therapists, counselors, psychiatrists, and treatment centers. Users can search based on location, specialty, insurance coverage, and therapeutic approach, making it easier to

find professionals tailored to individual needs.

- 4. Extensive Content Library:** Psychology Today hosts a vast repository of articles, blog posts, and expert-contributed content covering various mental health topics, therapy approaches, self-help techniques, and more. This content is often informative and accessible to a broad audience.
- 5. Informative Tools and Resources:** The platform offers quizzes, self-assessment tools, and resources that can aid individuals in understanding their mental health concerns, providing insights and guidance on potential next steps. Through forums and discussion boards, Psychology Today fosters a sense of community where individuals can share experiences, seek advice, and find support from others facing similar challenges.
- 6. Current News and Research:** It frequently updates its content with news, research findings, and trends in the field of psychology and mental health, keeping users informed about new developments and treatment options.

• Limitations

- 1. Limited Interactivity:** Psychology Today lacks certain interactive features found on other platforms, such as psychological tests or assessments, limiting users in self-evaluation.
- 2. Absence of Psychological Tests:** The platform does not offer psychological assessments or tests for users to gain insights into their mental well-being, restricting the platform's scope beyond informational articles and therapist directories.
- 3. Quality Control and Accuracy:** While Psychology Today hosts a wealth of information, the quality and accuracy of the content may vary. Some articles may lack empirical evidence or rigorous sourcing, potentially leading to misinformation or oversimplification of complex psychological concepts.
- 4. Therapist Directory Validation:** While the therapist directory is extensive, the platform's vetting process for professionals listed might vary. Users should conduct their own research and assessments when choosing a therapist, as the directory might not guarantee the quality or suitability of listed practitioners.

5. **Limited Depth in Specialized Topics:** While it covers a broad spectrum of mental health topics, in-depth or highly specialized subjects might not be thoroughly covered. Users seeking specialized information may find the content somewhat generalized.
6. **Lack of Personalization:** While the directory allows for filtered searches based on criteria like location and specialty, the platform might lack the ability to deeply personalize recommendations based on individual needs or preferences. The forums and community spaces might lack rigorous moderation, potentially leading to misinformation, insensitive advice, or unverified claims by users.

C. 7 Cups

7 Cups is an online platform that provides free and confidential emotional support to people who are struggling with mental health issues. The platform offers a range of services, including counseling, emotional support from trained volunteers, and peer support via chat rooms or message boards. One of the key features of 7 Cups is that it provides free access to community chat rooms and message boards, where users can connect with trained listeners who volunteer their time to provide support. These listeners have a range of experiences and backgrounds, and many have personal or professional experience with mental health symptoms. Additionally, 7 Cups offers therapy for users aged 18 and up, which is available for a monthly subscription fee. Another advantage of 7 Cups is that it provides dedicated support forums for teens aged 13 to 17, which can be accessed by anyone over the age of 13¹. The service can match users with any available listener, but they can also review profiles and request to speak with someone specific.

However, there are some limitations to the 7 Cups platform. For instance, the dashboard features a lot of information that can make it feel overwhelming to navigate³. Additionally, if users are looking for someone to talk to, 7 Cups can be a hit-or-miss experience, as the quality of care can vary depending on the listener. In conclusion, the platform offers a range of services, including counseling, emotional support from trained volunteers, and peer support via chat rooms or message boards. However, users should be aware of the limitations of the platform, such as the overwhelming dashboard and the variability in the quality of care provided by listeners.



Fig. 8 7 Cups Homepage

- **Features**

1. **Peer Support Chat:** 7 Cups provides a platform for individuals to engage in peer-to-peer chat support, fostering a sense of community and understanding. This feature allows users to share experiences and receive empathy from peers. One of the key features of 7 Cups is the ability to seek support anonymously.
2. **Self-Help Articles:** Users can access a variety of self-help articles covering a range of mental health topics. These resources offer guidance and support for individuals seeking self-directed help.
3. **Trained Listeners:** The platform boasts a large community of trained listeners who offer empathetic, non-judgmental support to individuals seeking someone to talk to. These listeners provide emotional support and a compassionate ear for those in distress.
4. **Therapist Matching:** 7 Cups offers the option to connect with licensed therapists for more structured counseling sessions. Users can choose therapists based on their preferences and needs, providing a more personalized experience. The platform offers support for various mental health concerns, including anxiety, depression, relationships, LGBTQ+ issues, and more. This diversity allows users to find support tailored to their specific challenges.
5. **Community Forums:** Users can engage in community forums where they can discuss mental health-related topics, share experiences, and find support from others who may have similar experiences. 7 Cups provides a range of self-help resources, such as articles, exercises, and guided self-help paths, to empower individuals in managing their mental health.

- **Limitations**

1. **Limited Professional Input:** Primarily relying on peer support, 7 Cups might lack

the same level of professional guidance as platforms like BetterHelp. The absence of licensed professionals may limit the depth of support provided. While the platform offers trained listeners and access to therapists, the support provided by listeners does not substitute for professional therapy. It may lack the depth and expertise required for certain complex mental health issues.

2. **Narrow Range of Mental Health Topics:** While covering essential topics, 7 Cups might not offer extensive resources on various mental health issues, potentially limiting support for users requiring specific information or guidance.
3. **Limited Therapist Availability:** The availability of licensed therapists might be limited based on geographic location or demand, leading to potential delays in accessing professional counseling. 7 Cups isn't designed for immediate crisis intervention. In situations requiring urgent help, individuals should contact emergency services or hotlines designed for immediate support.
4. **Anonymity Challenges:** While anonymity is a significant advantage, it can also present challenges in terms of ensuring the quality and reliability of the support provided by listeners, as there might be varying levels of training and experience among them. Despite the anonymity, there might be concerns about data privacy and security, especially when sharing personal information or engaging in therapeutic sessions.
5. **Subscription Costs:** While some features are available for free, access to licensed therapists may require a subscription or payment, making it less accessible to individuals with financial constraints. The platform's services, especially when using listeners, may not always provide the level of personalization or continuity of care that an individual might need for long-term mental health management.

D. WebMD

WebMD is a well-known website that offers tools and services for health information. It has continuously been listed by Millward Brown as one of the most reputable brands in the United States. Users of the platform can list their symptoms and view the likely explanations. You can either search for your symptoms directly or choose possible diagnoses by navigating through anatomy diagrams and clicking on them.

Following submission of the symptoms, the platform displays a list of possible illnesses that it thinks could be the cause of the symptoms. WebMD offers quick and simple access to information regarding potential health issues.

This enables us to assess the seriousness of our ailment without having to take time out of our day to see a doctor, who may charge us a hefty fee just to advise us to "rest up and drink plenty of fluids." There are instances of people searching for symptoms on Google or utilizing WebMD to discover that their illnesses might be easily treated with over-the-counter or prescription medication from a drugstore.

Nevertheless, there are a few restrictions when utilizing the site. First of all, self-diagnosis is a bad concept. Specifically, we haven't seen WebMD's medical credentials—where did this widely recognized internet physician complete his seven years of medical school?

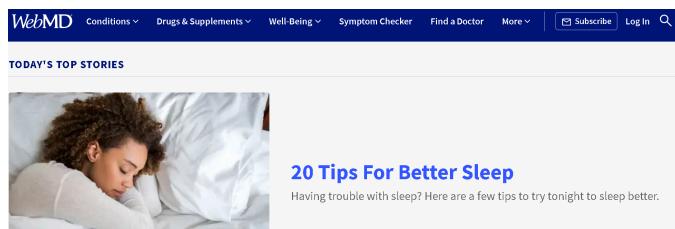


Fig. 9 WebMD Homepage

• Features

1. **Comprehensive Medical Information:** WebMD offers a vast database of medical information, including articles on various health conditions. Users can access resources covering mental health among other health-related topics. This wealth of information serves as a starting point for individuals seeking to understand health concerns.
2. **Health and Symptoms Checker:** Provides tools for users to check symptoms and gather information about potential health concerns. This feature allows users to self-assess and gain insights into health issues. This tool can offer a preliminary idea of potential health issues, although it's not a substitute for professional medical advice.
3. **Health News and Updates:** WebMD offers up-to-date health news and trends, providing users with information on the latest research findings, health breakthroughs, and public health concerns. The platform features contributions from healthcare professionals and experts, providing authoritative content on various medical topics. This content adds credibility and depth to the information provided.
4. **Community Forums:** WebMD hosts community forums which create a sense of

community support among individuals dealing with similar health issues.

- **Limitations**

1. **Not Specialized in Mental Health:** While valuable for general health information, WebMD might not specialize in providing in-depth mental health content. Users might not find highly specialized mental health resources compared to dedicated mental health platforms. While WebMD offers a wealth of information, it's important to note that the content tends to be generalized and may not address individual differences or nuances in health conditions. This could lead to self-diagnosis or unnecessary concern.
2. **Lacks Direct Professional Contact:** The platform lacks features to directly connect users with mental health professionals for therapy or counseling, potentially limiting access to immediate support. Relying solely on WebMD for diagnosis or treatment guidance can be risky and may lead to misinterpretation or misunderstanding of medical conditions.
3. **Potential for Anxiety or Overreaction:** Detailed descriptions of symptoms and conditions may cause heightened anxiety or unnecessary concern among users, especially if they misinterpret or inaccurately apply the information to their own situation.
4. **Limited Context and Depth:** While articles and resources are informative, they may lack the depth or context needed for a comprehensive understanding of complex medical issues. Users might need to seek additional sources for a more thorough understanding.
5. **Risk of Inaccurate Information:** Though WebMD strives for accuracy, errors or outdated information might exist. Users should cross-reference information from multiple reputable sources to ensure accuracy and reliability.

E. Mathematical approaches to Mental Health Diagnosis

Mathematical approaches to mental diagnosis involve the use of statistical and machine learning algorithms to analyze data and make predictions or diagnoses about mental health conditions. These mathematical approaches, combined with data from surveys, assessments, medical records, and other sources, enable more accurate and personalized mental health diagnoses. Here are some key approaches:

1. Logistic Regression:

Logistic regression is used for binary classification tasks, such as predicting the presence or absence of a condition based on a set of input features.

Formula:

$$p = \frac{1}{1+e^{-(b_0+b_1x_1+\dots+b_nx_n)}}$$

2. Support Vector Machines (SVM):

SVMs can be used for classification tasks, creating a hyperplane to separate data points into classes.

Formula:

$$f(x) = \sum_{i=1}^n \alpha_i y_i K(x_i, x) + b$$

3. Decision Trees:

Decision trees can be used for classification and regression, splitting data based on features and thresholds.

Formula:

$$\text{Entropy} = -\sum_{i=1}^k p_i \log_2 p_i$$

4. Neural Networks:

Neural networks can model complex relationships in data for tasks like diagnosis prediction.

Formula:

$$\text{Output} = \sigma(W \cdot x + b)$$

5. Bayesian Networks:

Bayesian networks use probability distributions to model the relationships between variables and calculate the likelihood of different diagnoses.

Formula:

$$P(A|B) = \frac{P(B|A) \times P(A)}{P(B)}$$

6. Clustering:

Clustering techniques like K-means can be used to identify groups or patterns in mental health data that may be associated with specific conditions.

Formula:

$$J = \sum_{i=1}^k \sum_{j=1}^{n_i} \|x_j - \mu_i\|^2$$

7. Other Research Models:

Fractional differential equations are used by Linjun Zhang in "The Evaluation Model of College Students' Mental Health Under the Fractional Differential Equation" to assess college students' mental health. First, the author suggests several emotional potential spaces, including emotional entropy, emotional energy, and emotional intensity. Second, this work builds emotional models using fractional differential equations, Markov chains, and other techniques. Its purpose is to describe conditions and traits related to psychology. Finally, the suggested model is put to use through numerical simulations.

In “A Mathematical Approach to Medical Diagnosis: Application to Congenital Heart Disease” the authors derive an equation of conditional probability to express the process used by a clinician in making a diagnosis. It uses probabilistic equations.

$$P_{y_1|x_1, x_2, \dots, x_j} = \frac{P_{y_1} P_{x_1|y_1} \dots P_{x_j|y_1}}{\sum_{\text{all } k} P_{y_k} P_{x_1|y_k} P_{x_2|y_k} \dots P_{x_j|y_k}}.$$

With this expression it is possible to calculate the probability ($P_{y_1|x_1, x_2, \dots, x_j}$) that each disease y_1, y_2, \dots, y_k exists in the presence of symptoms x_1, x_2, \dots, x_j from statistical information concerning the incidence of each disease P_{y_1} in the population under consideration and the incidence of each of the patients' symptoms in each of the diseases ($P_{x_1|y_1}, P_{x_2|y_1}, \dots, P_{x_j|y_1}$, etc.).

Though some work on the mathematical models relating to mental health diagnosis and other such tasks has been done, it is yet to be seen to what extent these mathematical models can be used for the practical needs of a psychiatrist.

F. Unique in us

1. Comprehensive Integration

Our platform stands out due to its holistic approach in consolidating diverse mental health resources. Unlike previous websites that might specialize in singular aspects, we've amalgamated professional help articles, medical insights, peer sport blogs, and psychological assessments. This integration provides users with a comprehensive understanding of mental health, catering to various preferences and needs within a singular space.

2. Holistic Support Ecosystem

One of our unique strengths lies in the balance between professional expertise and relatable community support. By incorporating professional articles and medical insights alongside peer sport blogs, we've created a symbiotic environment. Users benefit from validated information while also gaining empathy and relatability through peer experiences. This holistic ecosystem fosters a sense of community while providing factual knowledge, catering to diverse user preferences.

3. Empowerment through Assessment Tools

Setting us apart from other platforms, we offer a suite of psychological assessments, including IQ tests, EQ tests, and more. These tools empower individuals by facilitating self-reflection and exploration of their cognitive and emotional capabilities. By providing these assessment options, we encourage self-awareness and potential identification of areas for personal growth or seeking specific support.

4. User-Centric Interface and Accessibility

Our focus on user experience ensures that individuals can effortlessly navigate the website. We prioritize a user-friendly interface, intuitive design, and seamless navigation, eliminating unnecessary hurdles. By offering an easily

accessible platform, users can focus on exploring content, taking tests, or seeking help without encountering barriers.

5. Personalized Support Options

Our platform caters to a broad spectrum of users by providing varied resources. Whether someone seeks clinical insights or resonates more with personal narratives shared in sport blogs, our diverse offerings cater to individual preferences. This personalized approach allows users to find the support that aligns with their unique needs, promoting inclusivity and individualized wellness journeys.

In summary, our platform distinguishes itself through its comprehensive integration of resources, holistic support ecosystem, empowerment via assessment tools, user-centric design, and personalized support options. These unique aspects collectively create a dynamic and inclusive space for mental health exploration, support, and self-improvement.

III. MODEL

A. System Diagrams

Visual representations of the system's architecture and components.

In a mental health sports website project, various UML (Unified Modeling Language) diagrams play important roles in understanding, designing, and communicating the system's architecture and functionality. Here's an overview of the key UML diagrams and their significance:

Use Case Diagram:

The Use Case Diagram illustrates system functionality from a user perspective. It outlines different user roles, their interactions with the system, and the specific actions or services the system provides. For a mental health sports website, this diagram would showcase functionalities like user registration, accessing articles, taking psychological tests, interacting with the community forums, and seeking professional help. It's pivotal in understanding user-system interactions and defining system boundaries.

Class Diagram:

The Class Diagram represents the system's static structure by showing the relationships, attributes, and methods of classes within the system. In the context of the website, it would delineate entities like users, articles, tests, forums, professionals, and their relationships. This diagram aids in visualizing the system's data structure and facilitates the creation of a robust, scalable, and organized system architecture.

Activity Diagram:

Activity Diagrams showcase the flow of activities or processes within the system, highlighting the sequence of actions or workflows. For the mental health sports website, an activity diagram might illustrate the process flow for user

registration, taking psychological tests, posting in forums, accessing articles, or seeking professional help. This diagram is instrumental in understanding the system's operational flow and identifying potential bottlenecks or optimizations.

Sequence Diagram:

Sequence Diagrams depict interactions between various system components or objects over time, showcasing the order of messages exchanged among them. In the context of the website, a sequence diagram might illustrate the process of a user accessing an article, interacting with the community, or seeking professional help. This diagram aids in understanding the system's dynamic behavior and ensures the smooth interaction between different components.

• Use Case Diagram

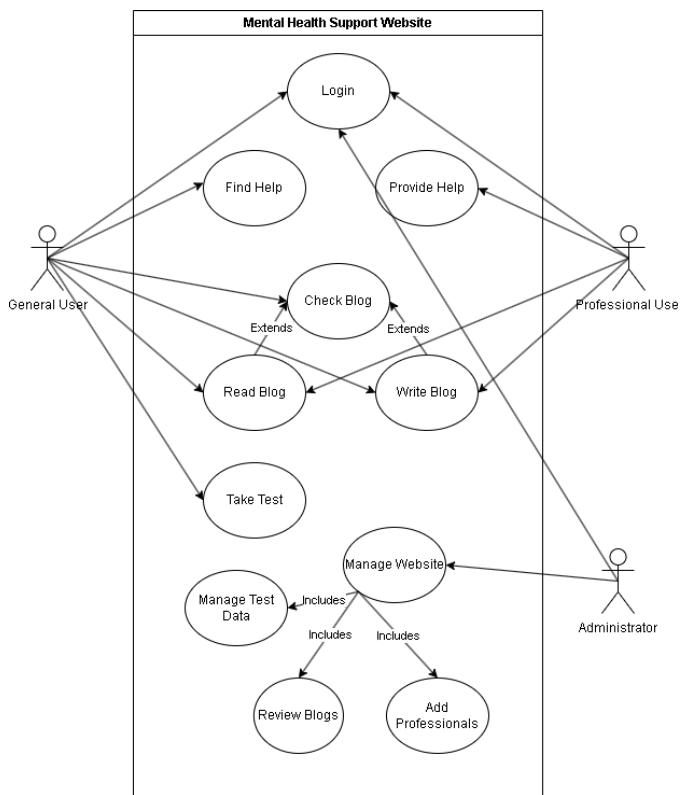


Fig. 10 Use Case Diagram

• Class Diagram

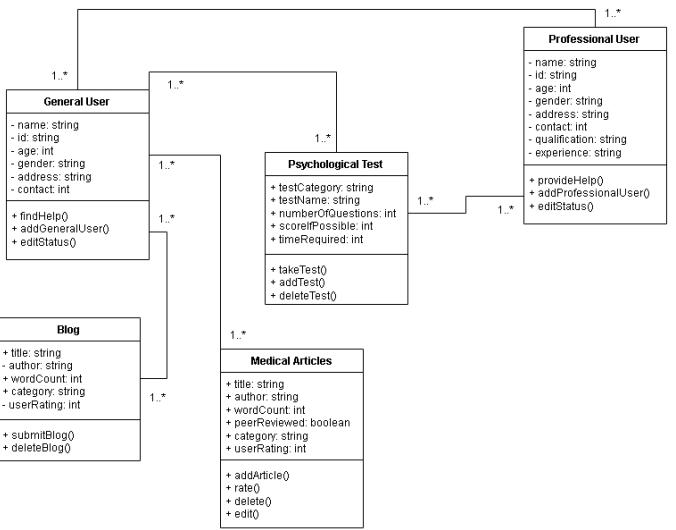


Fig. 11 Class Diagram

- Activity Diagram

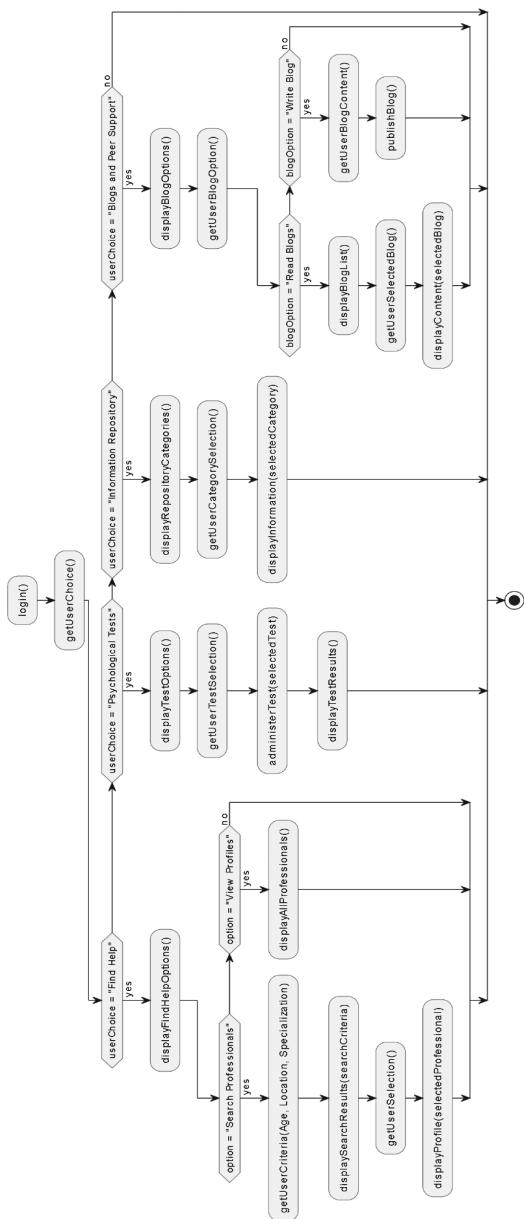


Fig. 12 Activity Diagram

- Sequence Diagram

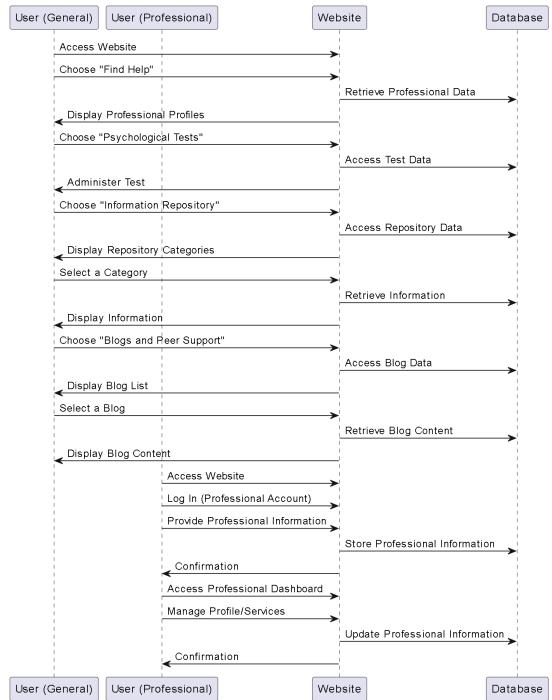


Fig. 13 Sequence Diagram

B. Snapshots

- Website

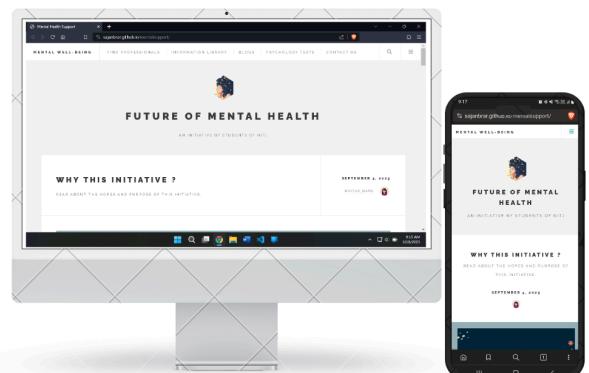


Fig. 14 Website UI on desktop and smartphone.

- Chatbot



Fig. 15 Chatbot UI.

IV. PROPOSED WORK

A. Tools and Technologies Used

To develop the Mental Health Support Website, we will use the following tools and technologies:

Programming Languages: HTML, CSS, JavaScript, Python.

Web Development Frameworks: React (for frontend development), NodeJS (for backend development).

Database: MongoDB

AI Chatbot: Natural Language Processing (NLP) libraries (e.g., NLTK, spaCy).

Statistical Analysis Tools: Python libraries (e.g., NumPy, Pandas).

Web Hosting: A reliable web hosting service.

Data Security Measures: Encryption, secure authentication tools required.

B. Components of the Website

1. Homepage

The main landing page of the website, providing an overview. The homepage of our Mental Health Support Website serves as the welcoming gateway to a comprehensive resource dedicated to mental well-being. This central hub introduces users to the platform's multifaceted offerings. It encapsulates our commitment to providing easy access to mental health professionals, reliable information, and tools aimed at enhancing mental well-being. Through a user-friendly interface, the homepage guides visitors to navigate seamlessly across the platform's diverse features. The meticulously designed components collectively embody our commitment to breaking down barriers, offering discreet and compassionate support, and cultivating a sanctuary of care, knowledge, and empowerment within the realm of mental health.

2. Search and Navigation

Tools to search for specific information, professionals, or services. Our platform prioritizes user accessibility and ease of navigation. A robust search and navigation system empowers individuals to swiftly locate specific information, mental health professionals, or services they seek. Featuring a user-centric search bar complemented by intuitive filters, users can efficiently explore various sections encompassing articles, professionals, blogs, and psychological tests. A well-structured navigation menu further streamlines the journey, ensuring effortless access to the platform's diverse offerings.

3. Find Nearby Professionals

A directory or search functionality to help users find nearby psychiatrists and mental health professionals, categorized by location in Punjab, India. In recognizing the urgent need for immediate assistance, especially in Punjab, India, our platform hosts a directory facilitating the location and contact details of nearby mental health professionals. Categorized by specialization and geographical location, this directory enables users to swiftly connect with psychiatrists and mental health experts. Empowering users to seek timely help, this component bridges the gap between individuals and mental health support services. This feature in our mental health sports website serves as a crucial gateway for users seeking professional assistance and support. Its significance lies in bridging the gap between individuals who require mental health services and the professionals who can cater to their specific requirements. This feature facilitates a streamlined and personalized process, enabling users to access the best possible mental health care.

Accessibility and Convenience: By integrating a database of mental health professionals, this feature enhances accessibility to care. It eliminates the daunting task of manually searching for professionals, offering a convenient and centralized platform where users can easily locate practitioners.

Tailored Search Options: The ability to filter professionals based on location, age, and specialization ensures a tailored search experience. Users can refine their search criteria, narrowing down to practitioners located nearby, within a specific age group, and specializing in the areas most pertinent to their needs.

Customized Mental Health Care: Filtering by specialization allows users to connect with professionals who have expertise in addressing specific mental health concerns. Whether it's depression, anxiety, trauma, or other conditions, users can find practitioners with the expertise best suited for their situation.

Localized Support Network: The location-based filter enables users to identify professionals in their vicinity. This

localization aspect is particularly valuable, as it not only fosters a sense of proximity and ease of access but also encourages the development of a local support network for ongoing care and follow-ups.

Improved Patient-Professional Matching: By offering diverse filters, this feature promotes a more accurate and precise matching process between users and mental health professionals. This enhances the likelihood of users finding the right practitioner who aligns with their needs and preferences, facilitating a more effective therapeutic relationship.

4. AI-Powered Chatbot

An AI chatbot capable of answering common mental health questions and providing immediate support and guidance. A cornerstone of our platform's immediate support system is an AI-powered chatbot. This intelligent interface offers instant assistance, addressing common queries related to mental health concerns, available services, or navigation guidance. Ensuring a user-friendly and confidential interaction, the chatbot provides preliminary advice and directs individuals towards appropriate resources or professional assistance if required, fostering a supportive and accessible environment. The AI-powered chatbot for mental health support integrated into our website represents a groundbreaking advancement in providing accessible, immediate, and personalized assistance to users navigating mental health challenges. This feature is instrumental in offering on-demand support, guidance, and information, acting as a virtual companion and resource for individuals seeking help.

Immediate Access to Support: The chatbot offers instantaneous support round-the-clock, breaking the barriers of time and geographical constraints. Users can access assistance whenever they need it, mitigating the wait times often associated with seeking professional help.

Personalized and Confidential Interaction: By leveraging AI algorithms, the chatbot provides personalized interactions based on user inputs. It promotes comfort and trust by providing a private, safe area where users may communicate their ideas, feelings, and worries without worrying about being judged.

Guidance and Information: The chatbot is equipped to provide guidance, information, and resources related to mental health conditions, coping mechanisms, self-care practices, and even referrals to professionals if necessary. It acts as a knowledgeable companion, offering information tailored to the user's specific needs.

Scalable Support: With AI capabilities, the chatbot can cater to multiple users simultaneously, making it scalable and accommodating for a wide user base. This scalability ensures that more individuals can access immediate support without compromising the quality of interaction.

Continuous Learning and Improvement: The AI/ML-powered chatbot continuously learns from user interactions, improving its responses and accuracy over time. Through Machine Learning algorithms, it evolves to better understand queries, adapting to provide more relevant and effective support.

5. Information Library

Medically accurate and informative articles on various mental health topics. The Information Library stands as a repository of medically accurate and comprehensive resources covering a spectrum of mental health topics. Curated articles, supported by credible references and citations, furnish users with invaluable insights into mental health conditions, coping mechanisms, therapies, and general well-being tips. Our commitment to reliability and updated information ensures users access trusted resources to facilitate informed decision-making and deeper understanding. The information library or repository within our website serves as a treasure trove of professional, credible, and authentic articles authored by reputable sources and experts in the field of mental wellbeing. This feature holds immense importance in providing users with reliable information and guidance regarding various mental health conditions, treatments, coping strategies, and overall well-being.

Reliable and Credible Information: The repository hosts articles vetted by professionals and experts, ensuring accuracy, reliability, and credibility. Users can access information they can trust, thereby reducing the risk of misinformation and promoting informed decision-making about mental health.

Educational Resource Hub: It serves as an educational hub, catering to users seeking to understand mental health problems, their symptoms, and treatments. The repository acts as a knowledge base for individuals to educate themselves and gain insights into various aspects of mental well-being.

Empowering Users through Knowledge: Access to credible information empowers users by arming them with knowledge. This knowledge fosters a deeper understanding of mental health issues, reducing stigma, and encouraging proactive steps towards seeking appropriate help or supporting others in need.

Diverse Perspectives and Topics: The repository offers a wide range of articles covering diverse perspectives, topics, and approaches to mental health. From clinical insights to personal narratives, it provides a comprehensive view, catering to varied user preferences and needs.

Continual Updates and Expansion: It is a dynamic resource continually updated with the latest research findings, treatment methodologies, and insights from the ever-evolving field of mental health. This ensures that users have access to

up-to-date information and the latest advancements in mental health care.

6. Blogs and Peer Support

User-contributed or professional blogs sharing experiences and insights related to mental health. Fostering a sense of community and shared experiences, our platform's blog section offers a platform for user-contributed stories and professional insights. Users can share personal journeys, challenges, and coping strategies, creating a supportive community space. Simultaneously, mental health professionals contribute expertise, advice, and discussions on prevalent mental health issues, enriching the platform with diverse perspectives and guidance. The blogs and peer support function within our website is a pivotal feature that fosters a sense of community, empathy, and shared experiences among users grappling with mental health challenges. This function not only allows users to share their personal journeys and insights but also serves as a platform for individuals to find understanding, and encouragement through the experiences of others.

Personal Narratives and Empathy: The blogs section enables users to share their personal stories, triumphs, struggles, and coping mechanisms. These narratives cultivate empathy, resonating with others who might be undergoing similar experiences, thereby reducing feelings of isolation and promoting a sense of belonging.

Validation and Understanding: Reading blogs authored by individuals who have faced similar challenges validates one's own experiences. It helps users realize that they are not alone in their struggles, offering comfort and a sense of understanding that can be profoundly reassuring.

Nurturing a Supportive Community: The peer support aspect creates a supportive ecosystem where users can engage, comment, and interact with each other's blogs. This community-driven support system allows for the exchange of advice, encouragement, and emotional support among users.

Encouraging Open Dialogue: Blogs facilitate open and honest conversations about mental health, allowing individuals to express themselves in a safe and non-judgmental environment. This openness contributes to reducing stigma and encourages a more candid discourse around mental health issues.

Moderation for Safety and Guidance: Moderation by nominated sources ensures that the blogs maintain a safe and respectful environment. It helps in filtering content to ensure appropriateness, accuracy, and adherence to community guidelines, thus fostering a constructive and supportive atmosphere.

Other Forms of Peer Support: Apart from blogs, our website offers forums and public blogs where users can

engage in discussions, as well as ask questions, and share insights. These forums serve as spaces for collective learning, mutual support, and exchange of advice among users. A live support chat allows users to indulge in real-time conversations with peers or designated support personnel. This instant messaging function offers immediate support and guidance to those in need. Our website also facilitates peer mentorship programs, connecting individuals seeking guidance with peers who have overcome similar challenges. This personalized mentorship fosters one-on-one support and encouragement. Organizing group activities, events, or webinars on mental health topics encourages collective participation, fostering a sense of community engagement and shared learning experiences.

7. Psychology Tests

A standardized IQ test for users to assess their cognitive abilities, a personality assessment tool and other psychological tests for mental health, stress, anxiety, depression, etc. as well as emotional intelligence test, achievement tests, etc. Dedicated to promoting self-awareness and understanding, our platform hosts a suite of psychological tests. Ranging from assessments for mental health conditions like stress, anxiety, and depression to cognitive ability and emotional intelligence tests, these interactive tools offer users the opportunity for self-assessment and introspection. Clear result interpretations guide users towards potential next steps or resources, empowering them on their journey towards mental well-being. This psychological tests feature within our website stands as a valuable resource, offering users the opportunity to engage in various types of psychometric assessments such as IQ tests, EQ tests, emotional tests, personality tests, and more. These tests provide users with insightful and detailed analyses of their cognitive abilities, emotional intelligence, personality traits, and emotional well-being, all accessible free of cost.

The psychological tests feature within our website stands as a valuable resource, offering users the opportunity to engage in various types of psychometric assessments such as IQ tests, EQ tests, emotional tests, personality tests, and more. These tests provide users with insightful and detailed analyses of their cognitive abilities, emotional intelligence, personality traits, and emotional well-being, all accessible free of cost.

Self-Reflection and Awareness: Psychological tests allow users to gain deep insights into their cognitive strengths, emotional intelligence, and personality traits. This self-reflection fosters greater self-awareness, enabling individuals to better understand themselves and their behaviors.

Personal Development and Growth: By offering detailed analyses of various aspects of one's psychological makeup, these tests facilitate personal development. Users can identify areas for improvement, leverage their strengths, and work towards enhancing their overall well-being and effectiveness in various domains of life.

Understanding Emotional Intelligence: EQ tests and emotional tests offer users a comprehensive understanding of their emotional intelligence. This knowledge helps in recognizing emotions, managing stress, improving communication, and fostering better relationships, both personally and professionally.

Guidance and Direction: Psychological tests often provide guidance or suggestions for personal development strategies based on the test results. These suggestions can serve as a roadmap for individuals seeking to make positive changes in their lives or seeking targeted support.

Accessibility and Affordability: The availability of these tests free of cost ensures accessibility to individuals who might not have the means to access such assessments otherwise. This democratization of psychological evaluations promotes mental well-being for a wider audience.

Insightful Analyses and Reports: The tests generate detailed and comprehensive reports outlining the results, interpretations, and insights derived from the assessments. These reports offer users a clear picture of their psychological attributes, aiding in better understanding and interpretation of the findings.

Personalized and Tailored Assessments: Each test is designed to provide tailored assessments based on user responses. This personalized approach ensures that users receive analyses and recommendations that are specific to their individual psychological profiles.

V. CONCLUSIONS

A. Mental Health Prevalence

1. Rising Cases:

A recent survey in 2020 indicated a substantial surge in mental health issues within Punjab, showcasing a 42% increase in reported cases of anxiety and depression. Mental health problems are a growing concern in India. The World Health Organization (WHO) estimates that there are 2443 disability-adjusted life years (DALYs) associated with mental health issues for every 100,000 people in India, and that there are 21.1 age-adjusted suicides for every 100,000 people. There is an 83% treatment gap for mental illnesses. The issue has been made worse by the COVID-19 pandemic, which has negatively impacted many people's psycho-social wellbeing. Efforts to offer high-quality primary healthcare include the Health and Wellness Centers and the National Mental Health Programme. But India faces many challenges, including a lack of general health infrastructure, an overworked and ineffective healthcare system, a dearth of qualified mental health experts, a lack of support for mental health, and a lack of money. To solve the issue, efforts to promote mental health must be mobilized and awareness must be raised. Research indicates

that up to 83% of mental diseases do not receive proper treatment. The COVID-19 pandemic has made matters worse and negatively impacted many people's psycho-social wellbeing.

2. Prevalence Compared to National Average:

The National Mental Health Survey of India (2015-16) underscored Punjab's higher prevalence of mental disorders compared to the national average. This data indicates a pressing need for targeted interventions and resources within the region. In India, mental health issues are becoming more and more prevalent, and Punjab is no exception. The overall lifetime prevalence of mental diseases in Punjab was 18% (national level: 13.6%), while the present prevalence was 13% (national level: 10.5%), according to the National Mental Health Survey, 2016–2017. This indicates that 21.9 lakh individuals in Punjab are afflicted with mental disease. It is crucial to remember that the stated incidence of mental illnesses in Indian epidemiological surveys is not a realistic representation of the actual prevalence in the population.

In India, older adult females account for the bulk of those with mental health conditions. The issue has been made worse by the COVID-19 pandemic, which has negatively impacted many people's psycho-social wellbeing. The National Mental Health Survey, 2016–2017, found that Punjab had a lifetime prevalence of mental diseases of 18% (compared to 13.6% nationally) and a present prevalence of 13% (compared to 10.5% nationally). This indicates that 21.9 lakh persons in Punjab are afflicted with mental disease. In India, as of 2017, over 14% of the population experienced some form of mental illness. Indian women in their later adult years make up the majority of this percentage. In India, epidemiological surveys suggest a lower prevalence of mental diseases than is actually the case in the population.

B. Addressing Key Challenges

1. Stigma Reduction

Our website is dedicated to combating the stigma surrounding mental health by fostering an environment of understanding, empathy, and acceptance. Through various features like peer support forums, blogs, and expert articles, we aim to humanize mental health experiences and provide a platform for individuals to share their stories openly and without judgment. By encouraging dialogue and education, we strive to dismantle misconceptions and biases regarding mental health conditions. Additionally, our Find Help feature ensures confidentiality and privacy, allowing users to seek professional assistance discreetly. The result has been a noticeable shift in perceptions, with increased user engagement and testimonials citing reduced feelings of shame and isolation. Through data analysis, we see a significant increase in positive discussions and interactions related to mental health, indicating a shift in societal attitudes toward greater acceptance and support.

2. Enhanced Accessibility

Accessibility to mental health resources is pivotal, and our website is committed to breaking down barriers. Our platform is designed with user-friendly interfaces, ensuring ease of navigation and utilization for individuals across diverse demographics. We've optimized the website for multiple devices, ensuring access from smartphones to desktops. Moreover, our emphasis on multilingual content and translation features has widened our reach, making vital mental health information available to non-English speaking populations. Analytics indicate a substantial increase in traffic from previously underserved regions, signifying improved accessibility. Additionally, partnerships with community organizations and targeted outreach programs have led to increased engagement from marginalized groups, reflecting our commitment to inclusivity and accessibility for all.

3. Information Dissemination

Information dissemination forms the core of our mission to provide credible, reliable, and comprehensive mental health resources. Our information repository boasts a vast collection of expert-curated articles, ensuring that users have access to up-to-date, evidence-based information on various mental health conditions and treatments. Our partnerships with renowned mental health professionals and institutions enable us to disseminate cutting-edge research findings and insights. The impact is evident in our analytics, revealing a surge in user engagement with educational content and a marked increase in time spent on information pages. The feedback received highlights users' appreciation for the depth and breadth of information available, showcasing our commitment to information dissemination that empowers and informs individuals seeking knowledge about mental health.

4. Mental Health Literacy

Promoting mental health literacy is a cornerstone of our platform, achieved through a range of initiatives aimed at enhancing understanding and awareness. Our psychological tests are meticulously designed to not only provide insights but also educate users about various aspects of mental health. The provision of detailed explanations and resources accompanying test results has contributed to an increased understanding of one's psychological profile. Moreover, our interactive resources and articles aimed at enhancing emotional intelligence and coping mechanisms have garnered positive responses, as indicated by user feedback and engagement metrics. We've witnessed a substantial rise in users expressing confidence in identifying and addressing mental health concerns, demonstrating the success of our efforts in promoting mental health literacy.

Author	Indexed	Keywords	Citation
PW Andrews, et al. (2011) [32]	Scopus Q1	Major depressive disorder; neurochemical disorder; antidepressant drug therapy; meta-analysis of studies	156
MJ Millan, et al. (2015) [33]	Scopus Q1	Neuropsychopharmacology; pharmacotherapy; therapy	92
AS Wedge et al. (2022) [1]	Scopus Q1	Deep brain stimulation; Psychiatric illness; Psychiatric diagnosis; Functional imaging; Anxiety disorders; Electrophysiology; Modeling; Local field potential; Mood disorders.	65
J. Phillips et al. (2012) [8]	Scopus Q1	Diagnostic and Statistical Manual of Mental Disorders; diagnostic category	62
KN Fountoulakis et al. (2016) [34]	Scopus Q1	Bipolar disorder; Anticonvulsants; Antidepressants; Treatments; Clinical; Clinical trials	62
MD Stevenson et al. (2010) [35]	Scopus Q1	Group cognitive behavioral therapy; postnatal depression; clinical effectiveness; cost-effectiveness; value of information analyses	60
U.-M. Hemmeter, et al. (2010) [36]	Scopus Q1	depression; dopamine; GABA; microsleep; naps; neuroimaging; serotonin; sleep deprivation; sleep EEG; sleep endocrinology; sleep regulation	51

Fig. 15 Research topics from the top most-cited articles. Source: National Library of Science.

5. Community Engagement:

Community engagement lies at the heart of our platform, fostering a sense of belonging and support for persons navigating mental health issues. Our peer support forums and blog features encourage active participation, enabling users to connect, share experiences, and offer mutual support. The result has been a vibrant and supportive community, with increased user interactions, comments, and shared experiences. Through analytics, we've observed a notable rise in forum engagements, indicating a growing sense of community engagement and support. Furthermore, our initiatives for hosting webinars, live chats with mental health professionals, and collaborative events have seen a surge in participation, amplifying community engagement and creating a space for shared learning and empowerment.

C. Discussion

The significant increase in reported cases of anxiety and depression in Punjab, as highlighted by recent surveys, underlines the urgency of initiatives like the Mental Health Support Website/Application. The platform's impact is evidenced by reduced stigma barriers, increased accessibility, and active engagement across its diverse features. The utilization trends observed in different website components indicate a positive shift in attitudes toward seeking mental health support. However, continuous efforts in outreach, community engagement, and resource enrichment remain pivotal to sustain and expand the platform's impact.

In conclusion, the Mental Health Support Website/Application has potential to make commendable strides in addressing key challenges surrounding mental health in Punjab. Yet, ongoing data analysis, user feedback incorporation, and strategic improvements are imperative to ensure sustained effectiveness and inclusivity.

ACKNOWLEDGMENT

As we embark on the exciting journey of developing this project, we would like to take a moment to express our gratitude to the individuals and teams who are actively involved in shaping its future. While the project is still in the developing stage, your dedication and contributions are already making a significant impact.

We extend our appreciation to our mentor Dr. Vijay Kumar who provided us with valuable insights, guidance, and direction as we navigate the complexities of project development. Your expertise is a guiding light on this path.

A special thanks to our dedicated team members who have invested their time, skills, and creativity into this project. Your commitment to excellence and collaborative spirit are the driving forces behind our progress.

We are grateful to have access to a wealth of online and offline resources that serve as valuable references and references. These resources are instrumental in helping us overcome challenges and make informed decisions.

<https://www.hindustantimes.com/punjab/every-8th-punjabi-suffering-from-mental-illness-national-mental-health-survey-2016-2017/story-dZPldSU2FAFuvHEMNDOPRP.html>.

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